MOL Thermol 32

heat transfer oil

MOL Thermol 32 is a mineral oil based heat transfer oil having high viscosity index and narrow boiling point range. The allowed maximum film temperature at the heat transfer surface is 340 °C, and in the system it is 310 °C.

The service life of the heat transfer medium depends greatly on the design of the heat transfer system and on the operating conditions. The service life could be up to 5 years, if the system is designed properly, and when it is protected from extreme load conditions. The service life could be extended significantly if low pressure (1.2 - 1.5 bar gage pressure) inert gas atmosphere (nitrogen) is used in an expansion tank.

For safety and economic reasons, it is recommended to check the condition of the oil on a regular basis, but once a year at least. Handling MOL Thermol 32 is safer than when handling most other synthetic oils, as it is not toxic and has a low vapour pressure. It can be collected as used oil after its application, for recycling or disposal.

The physical properties considered to be important in terms of heat transfer are collected in a separate table, as a function of the temperature.

Application

	Closed circuit heat transfer systems with indirect heating and forced circulation

Features and benefits

Excellent thermal stability	Resists thermal decomposition and deposit formation in the long term, even at high operating temperatures Extended trouble-free operation, so less downtime Low maintenance cost
Long oil lifetime	Oil change and reconditioning costs can be reduced significantly
Excellent thermal properties	Effective heat transfer between surfaces Improved efficiency, giving reduced operational costs
Good corrosion protection	Long-term protection of steel and non-ferrous metal parts
Simple disposal	Low cost
Compatible with usual seal materials	Usual heat and oil resistant seal materials can be used Lower possibility of contaminant ingression and oil leaks

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Temperature °C	Kinematic viscosity, mm2/s	Density g/cm3	Specific heat capacity kJ/kgK	Thermal conductivity W/mK	Vapour pressure mbar	Prandtl number
0	352	0,885	1,81	0,134		4198
20	88,8	0,872	1,88	0,133		1099
40	32,6	0,859	1,96	0,131		417
50	21,8	0,853	1,99	0,131		284
100	5,4	0,820	2,17	0,127	0,01	76
150	2,4	0,786	2,36	0,123	0,3	36
200	1,39	0,752	2,54	0,120	2,9	22,2
250	0,93	0,716	2,72	0,116	19,8	15,7
300	0,68	0,680	2,90	0,112	97	12,0
310	0,64	0,673	2,94	0,112	129	11,4
330	0,58	0,658	3,01	0,110	221	10,4

Specifications and approvals

Viscosity grade: ISO VG 32
ISO-L-QB
ISO-L-QC
DIN 51522 Q

Properties

Properties	Typical values
Colour (ASTM)	L 0,5
Density at 15°C [g/cm3]	0,872
Kinematic viscosity at 40°C [mm2/s]	33.2
Kinematic viscosity at 100 °C [mm2/s]	5,5
Viscosity index	100
Pour point [°C]	-12
Flash point (Cleveland) [°C]	230
Fire point (Cleveland) [°C]	270
Conradson carbon residue [mass %]	0,02

The characteristics in table are typical values of the product and do not constitute a specification.

Storage and handling instructions

Store in the original container in dry, properly ventilated area.
Keep away from direct flame and other sources of ignition.
Protect from direct sunlight.
During transport, storage and use of the product follow the work safety instructions and environmental regulations relating to mineral oil products.
For further details please read the Material Safety Data Sheet of the product.
In the original container under the recommended storage conditions: 48 months
Recommended storage temperature: max. 40°C

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